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## SPECIAL ARTICLES

### SOME ASPECTS OF VITAL STATISTICS

DR. A. C. JOST

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### THE SOCIAL ASPECTS OF THE VENEREAL DISEASE PROBLEM

EDNA L. MOORE

### THE IMPORTANCE OF TEACHING MOTHERS THE PROPER BREAST-FEEDING TECHNIQUE

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# The Public Health Journal

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## Some Aspects of Vital Statistics\*

BY DR. A. C. JOST, *Inspector of Health, Nova Scotia.*

THE most popular conception of statistics of all kinds is that the whole subject is one of the most excessive dryness, and that the individual who thinks otherwise or who attempts to form conclusive deductions from the mass of material he has collected, is suffering from some mild mental aberration, interesting, usually harmless,—were it not for the exercise of a curiosity which at times becomes a little too personal,—but from any practical point of view, valueless. To the individual who has this conception, and these are not few in number, the most imposing exhibit of graphs or charts prepared most laboriously and in the statistician's mind pointing to a conclusion which is most compelling, is regarded complacently as evidence only that certain individuals in this universe have peculiar tastes, or is summarily dismissed with the mental observation that figures no less than the individual who uses them can and do, at times so act as to lay themselves open to the charge, which is expressed by the "short and ugly word."

Such an one, however, has failed to realize to what an extent his whole life and action is governed by deductions so obtained. Does he pay taxes? His taxes have been determined from such data. Is he insured? Life tables state the amount which he shall pay. Does he reside in a city? Then his community is in existence, as a result of statistical conclusion. Or country? His prosperity or the reverse depends on the collection of statistical data and the conclusions made from their study. Like the widely known individual depicted by Moliere, who had been unwittingly talking prose all his life, there is perhaps no action of any individual which is not governed by the results of statistical study however little he

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\*Read at the Seventh Annual Meeting of the Association of Medical Health Officers and First Conference of Public Health Nurses of Nova Scotia.

may appreciate it, or which may not have been foretold as a deduction from some law of averages.

Inseparately connected with health problems of all kinds is the consideration of vital statistics in one of the three great subdivisions. The necessity for health work is by them made evident; the direction of health effort is by them governed; the measure of health efficiency is thus taken. On the accuracy of the vital statistics, their completeness and the deductions therefrom made depends the existence, the scope and the programme of a Health Department.

Reference has been made to the three subdivisions of the subject, which are population statistics, which give the number, the sex, the age grouping, the marital status and other information concerning the population; mortality statistics, which term is extended to include information concerning birth and marriage and as well as the death statistics which the name indicates, and morbidity statistics, which are statistics of disease. Each of these subdivisions has its own importance in various spheres of action. Each has its own significance in governing a health programme. Each has its own method of preparation and is collected through its own source of supply. To various considerations on these it is my intention to direct your thought.

The need of the first of these—namely, population statistics—was that which was earliest appreciated, and of attempts at the collection of these, records can first be found. In the times when wars were frequent and often carried to the point of ruthless extermination of the conquered, when the hand of every nation was constantly in readiness for swift attack or instant defence, it can readily be understood why, from a militaristic point of view, an appraisal of the capabilities of a nation became to be very early considered desirable or essential. And so Moses numbered the children of Israel and counted them; so the old Egyptians and Romans at least interested themselves in the collection of data, by which the number of men capable of bearing arms was determined; the readiness for offense was estimated, the power of resisting attack was judged, and the growth of the nation made capable of actual accurate measurement. Military necessity considered of supreme importance, the most accurate information of the man power ready to be launched against other nations or to defend their own females and children. The estimate of the relative number of these—the defenders and the defenseless—was therefore necessary, and we need be little surprised that the first attempts at census taking



appear to have been concerned with little more than the enumeration of the men, the women and the children of the race.

From this, the transition to attempt at the same time the inventorying of the nation with a view to determining its material holdings, was easy. What of household chattels, of cattle, of sheep, of horses, of produce, was it necessary to make provision to protect or was there that which might be considered as reserve, subsistence during isolation, or useful as a means of buying aid from other races who might, by payment, be bought off in attack or might be subsidized to come to the assistance of the distressed nation for a recompense of sufficient magnitude? Or, the necessity of the application of ordinary business methods as those which must control the countries' management; the appreciation that a stock-taking of the wealth or the capabilities of the country, which information might be gained at the same time as was being collected the information concerning the number of the people comprising the population, was gradually brought home. This information was valuable; it could be collected at comparatively little cost, if carried on at the same time as was the census taking; so it became quite early a part of the routine, and to the simple enumeration of the human members the addition was made of other data, the possession of information concerning which was of importance, till finally the practice of census taking at stated intervals became firmly established, and in our own Dominion the census-enumerator, at decennial intervals, makes his rounds and collects the information which makes up our fairly voluminous census returns.

There is every reason why this should be a national undertaking. The information which it is desired to obtain is information which is national in its significance, controlling as it does the policy of the nation, inventorying its wealth, furnishing the grounds for estimating its growth, providing the material from which the placing of taxes is determined, and indicating its power for attack and defence. These are all of national significance. It is the national bookkeeping, essential from every aspect, military, political, social, economical, religious and financial. It is the national stocktaking, and gives the national balance sheet without which it is scarcely conceivable that a national existence could be maintained.

From the health aspect the figures so obtained are most important. The general death rate of the country cannot without it be computed. That perhaps is the thing of importance to the statistical mind; but of greater importance are other considerations. The growth of the nation, the age grouping, its wealth, its habits, its

religions, its occupations, its manufactures, its morals, its mentality, the movements and density of population, the status and condition of the enumerated; all these have bearings on its health problems presented, which must be obvious to any person.

It may interest you to know that from the point of view of history, in our own Province of Quebec, long before the time of its coming into English possession, census taking, as considered now necessary, was thought advisable at a date which makes its records among the oldest in existence. Its figures go back to 1665, antedating the first United States census by 125, and the first English by 135 years, and are considered among the earliest of all modern censuses.

But there are considerations which make necessary other arrangements for the collection of information. A business firm can not exist if the attempt at bookkeeping is limited to the preparation of a balance sheet alone, at yearly, not to speak of ten yearly intervals, with no endeavour during the intervening time to determine its assets and liabilities, make provision for bad debts, calculate its stock in hand, and select the lines of endeavour which prove most lucrative as opposed to those which are a constant drain on its capital or which promise to make inadequate financial returns.

Further, there are many considerations which call for the collection and preservation of data, constantly being added to, constantly subject to instant examination under conditions which might be very inconvenient or cumbersome, were too large an area included in the administrative unit, or the information retained and stored at a place inaccessible to those for whose benefit it was obtained.

There are constantly arising questions relating to the descent of property, of the authenticity of birth records, of legitimacy, of age, of genealogy, which cannot be settled by hearsay or gossip. There are necessities for safeguarding the performance of the marriage ceremony, of placing for the benefit of the ignorant and unversed, additional obstacles in the way of its illegal performance. There is the need for recording deaths, since safeguarding life is one of society's greatest responsibilities; and these services should be ones being carried on continuously under conditions which make possible instant reference in a place accessible to the person whose records are therein kept. Consequently the registration of births, marriages and deaths become essential, and so the second great subdivision of vital statistics springs into importance, the collection of mortality statistics.

So far so good, but death is usually preceded by sickness, and the study of the deaths alone does not furnish very much information which it is most essential to have. Besides there are many diseases which are of great economic importance which do not show in the mortality returns; and the measure of a country's standard in public health work is the attitude taken towards the class of diseases called the preventable diseases; those of which a greater or less control has been obtained through years of experience or study. So there is need of information concerning sickness as well as of death.

Return again to the analogy before used, a mercantile establishment, having under its direction many and diverse interests requires some system under which there is prepared for the central office accurate reports of the condition of its various subdivisions or branches. It must be able to determine accurately and instantly its income and its output, must be able to recognize at a glance the department which is in need of supervision or extra effort, in order to bring it on a par with its fellows. The strong department calls for the maintenance of the conditions resulting in its strength; the weak needs bolstering and support. Otherwise it may be led into enterprises in which its profits will shrink, its capital become dissipated.

From a health point of view a corresponding supervision over the health needs of a country is necessary. There must be a certain organization which makes it possible to determine at a glance the actual standing of the living capital of the country, the special source of strength—as indicated by the health reports—which must be maintained, the sources of loss which must be combatted. Preventable disease is the greatest source of loss. We should have early information of its presence and the extent of its prevalence, if we wish to take adequate measures to protect a community from its ravages.

Consequently there is need for the collection of the information comprising the third great subdivision of vital statistics, namely, the morbidity statistics or statistics of disease. The extremely intimate connection between these two, that is, the mortality statistics and the morbidity statistics, is at once apparent, at least to those of us who are acquainted with the aims and ideals of a modern health department. Not always, however, has this been fully appreciated, for only by many evolutionary stages was this concept of such a department accepted, since in the earliest beginnings other than health motives prompted the collection of much of the

data. Of the first of these, the mortality statistics, the first compulsory collection was undertaken by Sweden in 1686—France following somewhat later, and English records dating back about 100 years, but in all these cases the great value of this information from the point of view of conserving the nation's health was not that which prompted the collection. The preparation of morbidity statistics is still more a development of recent times, first attempted for instance in Canada as a whole but several months ago, though the individual provinces have been active in this work for varying lengths of time.

It has been said that the recognition of their value from a health aspect was one of gradual development, a matter of phases and evolutions; so also their manner of collection has altered with the altering appreciation of their value. Where, as in many countries it was the case, the collection of mortality statistics antedated the formation of a properly functioning Health Department, the task of their collection was given to a separate and distinct department or bureau. This was the case in Nova Scotia. All modern procedure, however, tends towards linking up these two services in the closest co-operation, by placing both of these departments under the same administrative head. In a large number of the States, in every province of the Dominion, except Nova Scotia and Prince Edward Island, in short, in every place which has the benefit of public health legislation which conforms to the ideal of modern requirements, or which has been prepared with a view to permit it to have under its control all the agencies calculated to be of assistance in its magnificent and responsible task of conserving the country's health, this is the arrangement which is considered best to meet the requirements. In England the Registrar-General's Department, in existence for nearly 100 years, has recently been placed under the administration of the Health Minister, and the principle is recognized not only as one applicable to nations or countries, but as well to health administrations in large towns or cities. Wherever the health administration is granted the fullest scope; wherever there is made available for it all the agencies it should have under its supervision in the duty of safeguarding public health; wherever, in fact, the most magnificent advances have been made in public health work, this procedure is regarded as practically essential.

If a reason for this closer relationship is needed, the question may be asked, how in this particular does the task of conserving the health of a military force differ from that of preserving the

health of a country? And what would have been the result had the military medical service during the war just passed only had available for its guidance the number of deaths occurring among the troops? The remarkable results in preventive work done in the army was possible only because the organization permitted the instant appreciation of the extent and the nature of diseases of all kinds from which the force was suffering. The more nearly we can secure in our work the same information the more nearly can we hope to show comparable results.

Still a second reason for the closer connection and co-operation of the departments follows the altered concept of the purpose of registration. If, as was the original concept, mere tabulation was the aim, the country's statistical department might well be one, separate and distinct from all others. But, once the value of the department from the health point of view was appreciated, the accuracy of the information collected in fact, as well as in number, becomes essential. This brings into prominence the technical side of the information and emphasises the importance of a technical supervision in order to procure trustworthy and creditable data.

There is a vast difference, though it might not be appreciated by the laity, between miliary fever and miliary tuberculosis; the lay idea of dysentery differs vastly from the disease to which the term should be limited; one questions instinctively the report of deaths under one year which are attributed to cholera nostras, and either transparent errors or absurdities tend to lessen the value of reports which, it must be borne in mind, should be prepared to stand criticism in any country, or at any time, when the clearing up of a doubtful point, or procuring additional information concerning a rarity is not possible through correspondence.

Accuracy and correct diagnosis then largely determine the value of the mortality statistics, while prompt reporting is the feature which makes valuable the collection of morbidity statistics. Of what value to a Health Department is the information that scarlet fever was epidemic in a locality some weeks or months before its incidence was reported? Or that typhoid fever with possibly alarming fatality had occurred in a community some weeks previous? How can it attack the problem of preventing the spread of tuberculosis or venereal or any other disease unless it is in a position to judge quite accurately the number of cases in its field of effort? An embalmed record, one hoary with age, is valueless. These statistics at least must not be records of antiquity but the up-to-the-



minute report of the actual conditions present, if they are to be of assistance to the Health Department which gathers them. •

The part which the medical practitioners have in the collection and preparation both of the mortality and morbidity statistics is an important one, though the reports made by him may arrive at their final destination—the Health Department—through different channels. His reports to the Registrar of the sex and date of birth and the date and cause of death are the basis on which practically the whole superstructure of mortality statistics rests. So also the collection of the morbidity statistics compiled from the reports of the preventable diseases made by him to the Medical Health Officer of his town or municipality, which is the routine in Nova Scotia, depends upon the carefulness with which he attends to this most important portion of his duty. For it is a duty, recognized as such by any practitioner who has any but the most sordid and narrow view of the place which he, as a public servant, should occupy.

That this unworthy conception is not the one which is that governing the vast body of the medical practitioners is something for which we have reason to congratulate ourselves. Though the request for their co-operation and support in this work can be made to them but on humanitarian grounds, grounds which do not unfortunately give very bright promises of assistance in paying bank drafts, buying gasoline or keeping the home fires burning, the response has been of such a nature as to prove beyond a doubt that the bulk of the profession realize fully the importance of each contributing his mite towards the task of making the presence of preventable disease of all kinds as widely known as possible in order to assist in its suppression and control. Let us not forget that this is not a question of towns or parishes or counties. We are working for the good of humanity as a whole when we trace down and isolate an infectious case till the period of infectivity is past. Infectious disease knows no geographical limitations, recognizes no political boundaries. Its suppression in the most isolated hamlet may have a significance of tremendous moment to the farthest confines of our land. That this is the view of the medical profession, that each one in his field of effort recognizes himself to be responsible to his community, to his country and to humanity as a whole for his attitude in this matter is a reason for congratulation.

This subject is one, at this period, of perhaps more than usual importance by reason of the recent decision of the Federal Department of Health at Ottawa to attempt a compilation of the statistics of preventable diseases, from the reports submitted to it from the



various provincial sources. You are aware that for many years the Public Health Service of the United States has been preparing similar statistics for the area over which it has supervision. The Canadian plans contemplate a similar collection and will result in placing, in the hands of any interested person, for information and reference, figures as exact as may be obtained of the incidence and fatality of these diseases throughout the Dominion. Incidentally, the compilation will furnish a criterion of the preventive work being done in the individual provinces in this regard, and will, to a great extent, measure the efficiency of and the degree of support accorded to the various Provincial Health Departments by the members of the profession among which they work.

There does not appear to be any reason for the belief that the Nova Scotian figures will compare in an unfavourable way with those collected in the other provinces. To do so would confess the presence in this province of a profession uneducated to the realization of their responsibilities as public servants, a public sentiment unappreciative, negligent or irresponsible, or a method of collection, inadequate or perfunctory; any or all of which conditions it is quite safe to say can be disowned.

Not that we have yet attained a degree of perfection which permits a contemplation of the past with a feeling of satisfaction, however. It is quite fully appreciated that the results we have been able to produce cannot be stated to be accurate in fact, or in numbers. Any one who has seen a Division Registrar puzzling over the correct classification of a death reported to him as due to "double choked disks with no localizing symptoms," will realize that there is room for improvement in regard to the question of fact. And any one who in tracing up a scarlet fever outbreak gets fairly satisfactory evidence of approximately 50 cases to find on examination that but a meagre half dozen had been reported instinctively doubts the conclusions arrived at of the numbers showing on the returns. But it is felt that progress has been made, and this feeling encourages the hope of better results in the future, and, I trust, reconciles us all to the task of perfecting the education, of raising the standard of the public sentiment or simplifying and improving the method of collection which shall result in more accurate and more valuable returns.

For it is felt that each of us has in view a better Nova Scotia than that in which we now work and live. And, all working together, is not the future bright with the promise of improvement? My own feeling is that it is.

# Popular Health Education

BY D. A. CRAIG.

**I**N this address the education of doctors, dentists, nurses and those professionally engaged in Public Health work or preventive medicine is not included. We are dealing only with the placing of the principles of health before the people.

Chapin divides Public Health work into three periods. The first concerns itself chiefly with sanitation, the second with the isolation of the sick, and the third or modern idea combines the first two and adds the personal instruction of the individual.

Sanitation is only a part of Public Health work. It requires publicity rather than a detailed instruction of the individual. Clean water and milk supply and adequate sewage disposal are essential to any community, but the means to attain these must be carried out by the community itself. The individual citizen must have, however, sufficient knowledge of the requirements to vote intelligently in support of any means of improvement in this regard.

The education of the individual as to personal health and his responsibilities to those about him plays a very important part in our health work. In this regard one might mention the prevention of tuberculosis infection, the injurious effects of adenoids, and tonsils or bad teeth. These have a special individual value.

Often indeed we find that those interested and trained in Public Health work recognize the health needs in their respective districts, and know just what measures should be carried out by their governing bodies to meet these needs, but are unable to secure the required legislation or financial backing, because of a lack of public demand.

It is the function of any organization engaged in health educational work to mould and create this public demand and sentiment. It is this demand of the people for better health legislation and enforcement which moves governments to productive action.

The same type of health educational work is not suitable in all districts. The people must be approached in a language which they will understand. The coal miner in Cape Breton will not have the same viewpoint as the farmer in the Annapolis Valley. There must

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Read at the Seventh Annual Meeting of the Association of Medical Health Officers and First Conference of Public Health Nurses of Nova Scotia.

then be a study of the individual and a careful consideration of his mental attitude toward health matters. In some cases one must begin by breaking down old superstitions and starting with the very earliest rudiments of health education.

There are two main channels of health education. Firstly the education and training of the child, and secondly the education of the adult. We all realize that the first is of most lasting importance and has a greater bearing upon the future. Children are more impressionable, and the lessons learned are more lasting.

Health lessons taught to children if properly put are readily acquired as health habits. One or two hours a week in the school devoted to health teaching are of inestimable value. Fairy stories with a health lesson, attractive posters, playettes, and tooth brush drills, have a very large place in our popular health educational work. They interest and enthuse the child and readily make of him a real health crusader.

The education of the adult along health lines is a more difficult proposition. Few people indeed will read books, pamphlets, or scientific articles on health subjects. It is necessary to place before the individual something which he reads, hears or sees and readily understands without much appreciable effort on his own part.

A number of the more important agencies for popular health education may be outlined as follows:

1. Public Health Addresses.
2. Pamphlets, reading material, and Posters.
3. Health Exhibits.
4. Publicity in Newspapers and Magazines.
5. Novelties.
6. Health Plays—and Stories.
7. Pictures (a) Movies; (b) Still Pictures.

*Health Address*—In this regard the effectiveness depends to a large extent upon the speaker. If he or she knows how to hold and interest an audience good enthusiasm may be forthcoming. If on the other hand the speaker is hesitant, uncertain and dry, or his voice cannot be heard beyond the front seats he will do more harm than good. Any subject is just as uninteresting as the speaker makes it. Reading a manuscript in a monotonous tone of voice without lifting the eyes from the paper is a fatal mistake. There must be a determination to impress upon the audience at least one or two important points, and these may be illustrated by appropriate stories or local references. It is a mistake to try to put over too much in one address. Many of the audience will become con-

fused and misunderstanding will result. Then, too, one must remember not to overdo it by being too long winded. It is always well to stop when your hearers are wishing you would go on rather than when they are wondering if you ever will come to the end.

Papers and short addresses by lay people to societies and clubs often have a distinct value. There is a stimulus to the person preparing the address as well as to the audience who are made to feel that these health matters are not alone the field of doctors and nurses.

*Pamphlets, Reading Material and Posters.*—Pamphlets in the form of bulletins are very frequently issued by Health Departments and serve a useful purpose in keeping the work of the department before the public. They usually contain interesting statistics, but reach only a certain group of people, and from the standpoint of public health education do not always play a very important part. Circulars issued for adults may cover a variety of subjects, but as a rule it is better that only one subject be covered in each circular. The reading material must be plain and concisely arranged, and there must not be too much of it. If a mother receives a pamphlet on the care of the infant shortly after the birth of her child, the personal interest in her own offspring will naturally lead her to study the pamphlet carefully. People who have tuberculosis and know it, or perhaps have been in close contact with tuberculous patients will most likely give attention to any circular issued on this subject. The man in the street, however, is not very likely to spend much of his time in reading circulars or pamphlets of this kind. For him we must resort more or less to the tricks of advertising. Advertising plays a very important part in the business world to-day. Health is a purchasable commodity. It can be bought and sold. Why, then, should it not be advertised. Well illustrated posters, designed by good Public Health workers and produced by reliable artists are very valuable indeed. Poorly illustrated and designed posters are of little use, and may even be ludicrous. The picture or design of a poster should have sufficient attraction to lead the observer to read the printed matter.

Children's booklets in colored prints, well illustrated and with catchy stories are extremely useful. Nursery rhymes and fairy stories with a little health lesson woven in, leave a distinct impression on the mind of the child. Good posters for children are obtainable and may be hung in the school room or nursery. If they are attractive and simple they will have their health lesson for every child who sees them. Fairy stories and health posters give a won-

derful impetus to health teaching in our schools. The old idea of teaching a child that his stomach was in the abdominal cavity under the diaphragm had little if any significance as far as health was concerned. What matter if the child knows where his stomach is provided he knows what to put in it?

*Health Exhibits.*—We find our merchants spending a great deal of money and giving considerable time to the dressing of their store windows. They even employ experts to do this. Why do they do it? It is another factor in the advertising game. If then we are advertising health, why should we not carry out a similar plan. Health exhibits may be arranged without a very great deal of expense and may be carried from place to place. Exhibits may be illustrative of any branch or several branches of health work. In recent years the Department of Agriculture has sent an exhibit through the country in a railway car and many Health Departments have carried out a similar plan. Exhibits at exhibitions have a certain usefulness in drawing the people's attention to the need of health work and how it may be carried out.

*Publicity in Newspapers and Magazines.*—Short sketches or articles in newspapers or magazines written in a popular way have a certain value. Much depends, however, upon the ability of the writer to make a health lesson interesting. The value of paid advertising in public health work is to my mind questionable. The best effect in this regard may be secured by creating a situation concerning which the papers themselves will write.

*Novelties.*—Under the heading of novelties one must give attention to the clown and the health fairy. It is surprising indeed to note the effect that such novelties have, not only upon the mind of the child but upon the adult as well. Floats and health parades play a very useful part under certain circumstances.

*Health Plays and Stories.*—Little health plays or playettes as they are called, are specially prepared and written for children. They have a distinct place in interesting the child and teaching him a health lesson; as well the parents will always go to see these playettes and they, too, will secure a lesson.

*Pictures.*—The still pictures or lantern slides have for years occupied an important place in our health work, and it is not necessary here to say very much in this regard, as we are all acquainted with this subject. We have come now to probably what is the most important feature in putting over public health lessons—the moving picture. The educational film has an assured future and it will probably not be many years before every school and every educa-

tional institution will be fully equipped with a motion picture outfit to supplement lectures and other means of teaching. Good films on public health subjects are now obtainable. The film must have a human interest story or a humorous tendency in order to hold an audience. Some years ago people would go to a movie simply to see a man walk on the screen or a barrel roll down a hill, but to-day the popular taste has become quite factitious, and there is a demand for the best acting and technique in pictures. It is usually a mistake to do any speaking during the time a reel is being shown for the reason that the subject changes rapidly and the observer is apt to lose the trend of the picture if he attempts to listen to the speaker. Some of the more modern moving picture machines are designed so that the films may be stopped while the picture is being shown, giving the speaker an opportunity to speak while the picture is on.

If we are to stimulate an interest in health matters we must get people thinking about health. Even a vigorous opposition to a public health programme is better than a casual indifference. It is our duty as public health workers to place before the people of this province the community needs and the personal benefits to be attained, by a well organized campaign for better health.

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## Special Training For Public Health Nurses

BY MISS E. KATHLEEN RUSSELL.

**F**OR the public health administrator who is keen to see the development of what Sir George Newman calls the auxiliary services of his work, the training of the public health nurse is necessarily a question to receive attention. It seems to be generally conceded by both Canadians and Americans that graduate nurses are to do this work which our English cousins call health nursing. This is a rather comprehensive term including school and various types of clinic work, and the educational and follow-up visits in the home incident to any scheme of organized public health work; in many cases the public health nurse's duty also includes some bedside care for the sick. It is evident that we want a worker who is both a nurse and a teacher.

Pending any better arrangement, it has been agreed, at least in this country, that a hospital training is the best preliminary teaching for this public health nurse, but it is just as fervently agreed that a hospital training alone does not fit a nurse for this special field of work. Hence the demand, which came from the nurses themselves and their co-workers, that the special training which they needed should be forthcoming.

For several years, American colleges have been offering these specialized courses for public health nurses, and it has been in American colleges that Canadian women have been trained. Consequently these same Canadians have continued to work in the United States, and may be found there to-day in fairly large numbers. Two years ago Canadian nurses, through their professional organization, urged that public health training be made available for them in Canada. In response, six Canadian universities have made provision for this work, and others have tentative plans which may be put in operation at any time. In February, 1920, Dalhousie University, in Halifax, inaugurated the first of these courses in public nursing; in September and October of the same year, the University of Toronto, McGill University, and Western University of Lon-

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\*A five year course of combined Arts and Nursing, the first two years of which are to be spent at the University, the third and fourth in the hospital training school, and the fifth in special training. A degree from the University and the training school diploma will be given at the end of the double course.

don followed suit; in November, the University of British Columbia added a course in public health to the work for nurse education which had already been undertaken there, and in January, 1921, similar work was begun at the University of Alberta. These courses at Halifax, Toronto, McGill, London and Vancouver all cover one academic year which entails about eight months of work. Lecture courses and practice work are both included in the curriculum, the aim being to give the student a general training that will enable her to work acceptably with any public health administration, urban or rural. It is hoped that the special claims of rural work may be emphasized so that graduates will be prepared to undertake that work.

In considering the need of public health nurses for rural work, I wish to make a suggestion to the medical officers of the small towns and county districts. Will you encourage the giving of scholarships from your locality to well trained nurses who belong to your particular town or district, with the understanding that these nurses return to that county for a certain definite period after graduation. With some thought given to the working out of the detail, a splendid group of rural nurses could thus be enrolled. You may not wish to give scholarships, but at least you might recruit a student and offer some satisfactory suggestions that will induce her to obtain this training. Again, you might get some provincial association to interest itself on behalf of your needs for rural workers. You must understand that at present the larger number of students taking this special training are already residents of the city where the course is being given. After graduation many of them must still remain residents of the city in which their homes are placed, and can accept only such work as is offered there.

Many scholarships are now being given to nurses to enable them to take these courses. We are glad of that because it means that the mere chance of financial standing will not determine the personnel of our classes. Probably the custom of giving scholarships and bursaries will steadily increase in our universities, and so opportunity will be greater for all to receive the training they desire. The Provincial Red Cross Societies are doing most valuable work by giving scholarships to well equipped nurses, and have thus been a strong force in enabling these university departments to enrol desirable classes. For the current year, 1921-1922, the Victorian Order of Nurses is also giving a large number of scholarships, distributed among the various provincial universities, and in this way has given some particularly promising students this opportunity.

So special training for the public health nurse is now available in Canada. Such work is still only in the experimental stage, and it is difficult to tell which way it will develop. There is a probability that the three years' hospital training may be adjusted to admit of specialization in the senior year, and thus the routine workers might be prepared for the public health nursing field in three years, instead of four as at present. One thing, however, is quite evident, and that is that we need a greater number of highly educated women for the teaching and administrative posts in the nursing profession. As the work of the profession expands, the need for these increases proportionately. We must not leave the filling of that need to chance. Our present university nursing departments should be developed until we find a reasonably economical adjustment, so that university graduates may pass on to nursing schools, or nurses back to university work without unnecessary loss of time, and find provided for them a carefully arranged sequence of study and training, the result of which will be in proportion to the time and energy expended. We have had under-education in the nursing profession, and it produced Sairey-Gamps; let us try over-education, that bogey of the highly imaginative, and see if the results will really be as dire as some pessimists suggest.

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## The Social Aspects of the Venereal Disease Problem

BY EDNA L. MOORE, *Social Service Nurse, Division of Venereal Diseases, Provincial Board of Health of Ontario.*

IN considering the social aspects of the Venereal Disease Problem we are not entering a new field. For centuries community conduct has been mirrored in community health.

More than three thousand years ago Moses commanded that all captive Midianite women, not virgins, must be slain. Why? Because only a few years before a plague had come upon Israel, because of certain conduct instigated by Midianite women.

Time will not permit to trace this relationship through the intervening years. In our own time we have much to emphasize it. The Sydenham Royal Commission report in 1916 brought many facts to the mind of the British public. An investigation was carried out in Ontario in 1917 with the result that in the session of 1918 the Government passed the Venereal Diseases Prevention Act. This was supported by a Federal measure—the voting of money to the Provinces on condition that an equal amount be voted by the Provinces themselves.

Clinics have been established by the Departments of Health; the education of the public mind is progressing. The formal aims and objects of the Canadian National Council for Combating Venereal Diseases are in part:—

1. To combat venereal diseases by whatever means seems desirable.
2. To encourage and assist in the dissemination of a sound knowledge of the physiological and moral laws of life in order to raise the standard both of health and conduct.

In every instance mention is made of anti-social conduct. The fact that, among sex offenders, a higher percentage of disease is found than among other convicted persons surely means something definite to us.

In the past we have heard said that the problem of venereal disease should be relieved of all moral and social issues and be

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Read at the Annual Meeting of the Canadian Public Health Association,  
May, 1921.

placed solely on the ground of the control of communicable disease. There are yet some adherents to this belief. I approach this question with the firm conviction that the moral issue is the more important but it must not be divorced from that of Public Health. Moral tendency has its mainspring in Spiritual and Ethical convictions, the matter with which Father Minehan (the next speaker) will deal.

The family is the oldest institution we have; let us consider how it may be affected by V. D.

There is the case of John Smith, who in his youth was given free rein to sow his wild oats in the firm belief that he would settle down later to a proper family life. In a few years he married thinking himself cured of the disease that he had contracted. Years have passed; there are two boys in the home—twelve and nine years of age. The husband became violently insane, and was committed to one of the Ontario Hospitals for the Insane. The wife was left with no savings and having had no vocational training was obliged to take work washing dishes in a restaurant from 8.30 in the morning to 5 in the evening for \$10.00 a week. With this mere pittance she had to face the task of paying \$18.00 a month rent for her cottage, providing food and clothing for herself and two boys. Her husband died in two years at the age of 36. In the course of a few months an investigation was being made of all possible contacts of cases of death from syphilis. This case was registered, Cause of Death, Paresis. The home was visited by a social service nurse, who was sufficiently tactful to persuade the wife to attend a medical clinic presumably because she complained of pain in her side. However, before the clinic day came the nurse had communicated with the social service nurse of the Out-Patient Department. The history was given and arrangements made for a blood test to be made. The reaction result was V. S. P. Mrs. Smith was then persuaded to bring the boys to the clinic. The older boy, who is almost an incorrigible, was also V. S. P. and the younger one negative. It was then found from history that there had been three children, the first stillborn. The doctor in the clinic explained something of her condition to the woman and she agreed to start treatment at once and bring the boy. Her rent was falling behind; the children needed clothing and the woman sadly needed a friend. A social agency, well known for its constructive work, has taken the family in hand. The older boy has been taken from school and put to work at the age of fourteen as his earnings are so badly needed.

Had this father and mother been educated to tolerate only the single standard of morals, this home would not present such a social problem, and had they received the examination at the time of the still birth that we would reasonably consider necessary to-day, would the future not be more hopeful for these boys? Is it not probable that the father might yet be the head of his family? At this stage the family doctor could do a great deal, but who will pay. Socio medical work demands time and the busy doctor has many other cases. Under such circumstances the state will suffer financially. These two persons must be treated at the public's expense, and the boy's whose education has been limited will, no doubt, be industrially much less efficient. These are the inevitable results of "wild oats."

There is the sad break in the home where the daughter has fallen into questionable ways. She may have left her home for the city. The newcomer to prostitution is frequently a runaway girl with not sufficient will power to abandon the life voluntarily. She has not paused to consider what was before her. She has been drifting. She may have been deserted by the man who promised to marry her and has been turned from home when it was discovered that she was to have a child. Her parents do not see that anything worse can happen to her than that she should have sacrificed her virtue; they do not realize what depths of degradation are possible for her through prostitution. Without the slightest consideration whether or not she will be improved in character, they insist on teaching her a lesson when it is nearly twenty years too late.

We might mention sterility. There is the incompleteness of the childless home, and the loneliness of the one child family, sometimes the result of gonorrhoea.

The chronic prostitute or the old timer as she is known to the other girls, has given up all hope of escape. She has had no vocational training. She is bound as truly by fetters as though it were a physical servitude. She is confident that the hand of society is raised against her and she cannot believe that there is anyone in the world who, from an unselfish motive, really wishes to help her. Always there is a spirit of unrest and of fear, and if she drowns herself in drink and drugs it is merely to forget. She becomes less attractive in appearance, less clear in perception and less concerned about what becomes of her. She believes she is being pursued and at each step, nervously looks behind her. She tells marvellous stories about herself which are neither true nor the product of her



once vivid imagination. We realize that her hallucinations are the result of a drug and that she is in the grip of opium or cocaine. We are not surprised to learn later that she has become a ward of the State in an insane asylum.

Like all of us, these girls had the same potentialities, both for good and for evil, but instead of meeting forces for strengthening and upbuilding character, they had come in contact with vicious influences.

The relationship between mental defectiveness, delinquency and venereal diseases is easily recognizable—many feeble-minded children show precocious sex knowledge—are noticeably erotic, have immoral habits and tendencies and teach other children vicious practices. They are easily influenced, choose inferior associates and are subject to none of the checks operating upon normal individuals. Their inefficiency in work causes them to be discharged frequently and to drift from one low grade occupation to another. There are seldom any restraining influences in the home. They readily become the prey of vicious men and women. Is it any wonder that the boys often drift into crime and the girls into a life of immorality? It is obviously the easiest way. Many of the young women give birth to one or more children and later join the ranks of prostitution. These cannot be reformed. Only a safe environment will save them. Their deficiency is congenital; intellectual development is impossible, yet had society safeguarded them from the time they were children, instead of being on the way to becoming the most hopeless dregs of humanity, they might now be living happy, useful lives, and society itself would have been saved the financial burden of their feeble-minded offspring.

For the social prevention of any communicable disease there are two main lines of work.

1. Measures intended to prevent the conveyance of infection from persons known to be infected;
2. Measures calculated to remedy those conditions of life which favor the propagation of disease.

The first belongs to the physician, the nurse and the social worker. In the large centres where a V. D. clinic is in operation a social service nurse is attached. Her work is almost parallel to that of the "trouble man" in a large industry or business concern, or as I recently heard her described as the "shock absorber."

The machinery of society needs a go-between as much as the machinery of business.

In the case of patients receiving treatment for gonorrhoea and syphilis it is necessary for some one whose time is not so valuable as that of the doctor, to encourage the patients. To obtain their full co-operation it is necessary that they understand their exact condition so far as they are mentally capable; also the relation of their handicap to the economic situation and their responsibility for posterity. The social service nurse obtains a social history of each girl and woman; and just here let me say that it's very difficult and most unsatisfactory for the nurse to take the social histories of the male patients. If there is history of immoral conduct the doctor can easily obtain this while taking the man's medical history. The man's honesty may be appealed to with the result that he will persuade his partner to report to the clinic for examination and diagnosis. But many men and women suffering from V. D. do not attend clinics. They are treated by their own physician. Apparently the most difficult problem is the one when the husband is diagnosed and he is told by the doctor that his wife and family may be infected. His first thought is of secrecy—he foresees a catastrophe in his home. The doctor will point out the only possible line of action, but he is often hindered in his efforts in that he is not the family physician. If, however, he is the wife's doctor he can examine her without causing suspicion. If she is infected she will want to know why she is advised to take treatment, and the average man and woman of to-day understands to a degree something of anatomy and physiology and they expect an explanation of the diagnosis made. The reign of the magic medicine man is past and the day of the socio medical practitioner is here. It has been found possible by careful approach to the home to prevent the catastrophe of divorce, and I know of two families whose domestic ties have been strengthened as husband and wife persisted with treatment under the orders of their doctor, in spite of the interference of relatives who advised separation or divorce.

The second measure for prevention is in the hands of the intelligent citizen. Every community has organizations that would willingly assist the doctor if he will but call upon them. Every church has its associations and they want to be used. I appeal to you as leaders of community work to use these clubs until they have caught the broad vision or if laggards, until they have fallen by the way.

We have seen many flaws in our social fabric. Where are the remedies? Have we access to them? Yes—And they must of necessity be along constructive lines.

Parents and teachers must co-operate in the teaching of their children for we will remember that children are born with racial instincts, family tendencies, but without habits. They must be taught by example and precept that the home is the centre of happiness; that marriage means taking the responsibility of a home.

Better recreation is imperative—re-creation four-fold, mental, physical, social and spiritual. We find this exemplified in Girl Guides, Boy Scouts and Canadian Girls in Training. Increased athletic facilities, out of door games where normal companionship between boys and girls may be stimulated, are very necessary. Education in physiology, the psychology of the emotions, in household arts, child care and manual training. This should be balanced by a common interest in community life, its problems and their solution, impressing upon them their responsibility as citizens for the underprivileged in society and the establishment for all time of the single standard of morals. These suggested remedies demand law enforcement with reference to undesirable commercial amusements. This is the age of social legislation. We have all noted the number of bills relating to social questions introduced in the recent session of the Legislature. It is part of the process of evolution in Government, and the way we deal with it at the moment will dictate whether the result shall be the greatest possible or not. If social legislation is to be robbed of the benefit of science, then, however, just the aim, that fairness which would be supplied by scientific accuracy will be wanting. The appeal I make to you to-day is the appeal to add to social legislation scientific judgment and fairness, so that the pendulum of law enforcement may not swing too suddenly to the extreme, but remembering that

“A man's reach should exceed his grasp,  
Or what's a Heaven for.”

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## The Importance of Teaching Mothers the Proper Breast-Feeding Technique

BY DR. GEORGE SMITH, *Toronto.*

THE importance of breast-feeding in the problem of the reduction of infant mortality has not as yet been fully realized. True, we say that 10 bottle-fed babies succumb to disease to one breast-fed infant, but the fact has not made the laity any more anxious to refrain from bottle-feeding, nor has it resulted in making physicians preach the importance of breast-feeding to their patients. The charge is often made that the mothers of to-day are not anxious to nurse their offspring. We think this to be untrue and rather feel that the trouble is that often they do not know exactly how to solve certain simple problems which they all meet. The glowing pictures sent them by various patented food concerns combined with the fact that their written instructions makes feeding clear to them, too often result in their changing to some artificial feeding.

There is no doubt but if expectant mothers made it their business to learn all about the technique of breast-feeding we would have a great many more babies enjoying the advantages of Nature's food. As yet, there is very little source open to them for the study of such problems. Realizing this to be the case, the Department of Public Health, Toronto, through the Division of Child Hygiene, is at present preparing a pamphlet on this subject, outlining the principles underlying the secretion of milk, the amount of milk required for babies of different weights, the proper feeding interval, etc. Besides the P. H. nurses have been concentrating on this subject and expect to be able to render valuable assistance to the physicians, by visiting the house of the expectant and nursing mother.

This work was undertaken following a study of our infant mortality table last year. We found that of 1,419 deaths 303 had been premature infants, 224 died of gastro-intestinal diseases, while 248 deaths were caused by such diseases as pneumonia. In all these conditions a breast-fed child has a much better chance of surviving than a bottle-fed infant. It was impossible to learn how many premature babies have been breast-fed. It has long been felt that

to save premature infants two essentials are necessary. They must be kept warm; they must be fed breast-milk. The deaths from gastro-intestinal diseases are in a great measure caused by summer diarrhoea and decomposition, due to improper bottle feeding, i.e., cases in which if babies could have been kept on the breast-milk, this fatal result would have been avoided to a great extent.

And, lastly, there was the group of deaths due to the diseases of bacterial origin. It has been claimed in the past that a certain amount of immunity is transferred from the mother to the child by her milk. Whether this be true or not, at least we know from our clinical experience that breast-fed babies have a much lower mortality from such conditions than have bottle-fed babies. Any properly nourished child should have more resistance than an improperly nourished one. So much is this the case that breast-fed babies are often called lobar babies, meaning that if they develop pneumonia it will likely be this more favourable type; while babies fed on the bottle, if having nutritional disturbances, develop the bronch-type of pneumonia under the same conditions.

The greatest boon which could happen in connection with breast-feeding would be that every expectant mother might receive early in pregnancy instructions which they might learn how to carry out. A spirit of morale would soon be developed which would make every mother anxious to do the best for her infant. The result would be an application to those things which would be of great value later on. The knowledge of a proper diet, of the correct amount of exercise, and the technique of breast-feeding should easily be acquired.

This understanding of right principles would go far towards putting her in the right mental attitude towards later breast-feeding problems. The elimination of false ideas, such as the fear that because her own mother had not nursed her children, she would not be able to do so, or the fear instilled by some misinformed pessimist that her milk might not agree with the baby—the elimination of these ideas, combined with a few simple instructions would soon establish a confidence in herself which would ultimately result in successful nursing. There is no doubt that success here is often largely a psychological problem. Physiologists tell us that there is no known diet or drug which of itself will stimulate the flow of milk. Yet how often one hears of different preparations or foods which will do this. The mother has faith because of a confident, inspiring nurse or doctor, who tell her this will increase the flow. Just what principle is at the bottom of this phenomenon is difficult

to say. The same cause may explain the action of worry, fright, etc., on the diminished secretion of milk. Cases are known to all when the milk supply apparently has stopped over night following some mental strain. May the same explanation be involved in those cases where a cow is supposed to be holding back her milk following some fright from dogs, etc.?

Enough has been said to suggest that the mental attitude of the mother is of great importance. Freedom from worry, a confidence in herself, that she is able to nurse her baby, and a knowledge of the correct technique usually carries success.

Just a few words about diet. It has been shown that during the prenatal period, about 5% increase in the usual daily consumption of food is all that is necessary. The great increase which some women take—

1st—makes the child larger and so increases the danger at labour.

2nd—tends to make the mother herself fat and lethargic—decreasing the functions of all the glands.

After the birth of the child, the added strain on the mother's nutritional organs is taken care of by an increase in her diet which, measured in cows' milk, should double the amount of breast-milk given. She should eat regularly, a plain wholesome diet, having no fear that any ordinary article of diet will upset her. Excessive consumption of fluids is uncalled for and tends to decrease the mother's appetite for her regular meals.

There are two fundamental requirements for the regular secretion of breast-milk—namely "*Stimulation by Suckling*" and "*The complete emptying of the breast at each feeding.*"

The suckling of the healthy baby stimulates the breast to further output. If a baby is not getting sufficient milk from one breast—then the nursing from two breasts at each feeding may be resorted to. This increases the total amount of milk—the amount being increased in each breast. If nursing every four hours the baby does not get sufficient, then nursing every three hours should increase the supply. At this point may we draw attention to the fact that the baby should be nursed regularly by the clock. By doing this, the stomach has a period of work and rest, as long as the baby is not nursed more frequently than every three hours. It takes about two and a half hours for the stomach to empty itself. An interval shorter than three hours should, therefore, never be used. Most babies do better on a four-hour interval than on a three hours. As to whether the 3 or 4 hour interval is used



is decided by the amount of breast-milk available—if coming freely—of course use the four hour interval—if not so freely—the three hour interval.

The second and equally important principle is the complete emptying of the breasts. A breast which is not completely emptied soon begins to secrete milk—while one regularly emptied has a uniformed sustained supply. One frequently finds a mother wanting to replace a nursing by a bottle. This of course lessens the amount of milk secreted, for the breast loses a stimulation and is not completely emptied at the usual time.

Another class to be spoken of is the premature infant. These babies are not strong, do not nurse vigorously—therefore there is poor stimulation and incomplete emptying of the breasts—of course this case has but one result—soon there is not sufficient milk in the breasts and the baby finds it more difficult than ever to obtain a supply.

It is in this type of case, that manual expression of the milk is most useful and indeed be the means of saving the baby. The ampullæ or reservoir are just beyond the coloured areola of the breast. By use of the thumb and forefinger, starting in this area, the breast is grasped and with a motion similar to that of a milk-maid's in milking a cow, the milk ducts and reservoirs are emptied. No undue force is used. The results are much better than a breast-pump. The milk obtained in this way is fed to the infant by a dropper or Breack feeder. The thorough application of this principle until the premature infant is strong enough to nurse will save many babies.

In the type of pamphlets previously mentioned, which should be available for every nursing or expectant mother, and put in their hands as soon as possible. Several points should be considered:

1st—An assurance that every mother should be able to nurse her baby if she prepares herself to do so by following the rules laid down, and so gain confidence in herself.

2nd—Instruction as to diet, recreation and sleep.

3rd—An outline of the principles underlying the secretion of milk, i.e.—

1st. Stimulation by nursing.

2nd. The importance of emptying the breast, at each nursing.

4th—Informing the mother that a baby getting the correct amount of nourishment is seldom sick. That the trouble is caused by the infant obtaining too much or too little milk. That this is

proven definitely by weighing before and after nursing to learn how much the baby obtains and by referring to a table to show how much it should get for its weight.

5th—Setting forth the principle that when the mother did not have sufficient breast-milk that a nursing from both breasts should first be tried and if this were still not enough—the completion of the feeding by a modified milk formula. Not by weaning.

Such a pamphlet with the assistance of the nurse or physician should help very materially in substantially increasing the number of breast-fed infants.

We print below a copy of the "Bulletin" on "Breast-Feeding," mentioned in Dr. Smith's paper.

Over 6,000 of these were disposed of in two months, which proves the point emphasized, namely, that the public is looking for information on this most important subject:—

Department of Public Health,  
City Hall, Toronto.

#### BREAST FEEDING.

Recognizing the fact that the greater number of infant deaths occur among babies that are bottle-fed, the Department of Public Health is endeavouring in various ways to encourage breast-feeding.

One often hears it said that the mothers of to-day are not anxious to nurse their children. We feel that this statement is untrue and unjust, and rather think the difficulty in the breast-feeding problem is that the mothers do not know how. In many instances the mother is not familiar with the principles underlying breast-feeding, and does not know how easily any difficulties can be overcome.

With the intention of instructing mothers when necessary in proper breast-feeding methods, the department arranges to have a public health nurse visit each mother, as soon as possible after the birth of the baby has been registered. Therefore early registration means a great deal, as often in the first week or two breast-feeding is given up, because of the lack of knowledge of the methods of stimulating and increasing the flow of milk.

Your co-operation is needed, even if our instruction is not neces-

sary in your case. Help us in attacking this problem which means so much to the babies of Toronto.

#### PRINCIPLES UNDERLYING THE SECRETION OF MILK.

There are three chief facts in regard to milk production which must be known to enable you to nurse your baby successfully. *The mother requires an increased amount of nourishing food and an increased amount of fluids.* The fluids, however, should not be increased to the point where they interfere with the mother's appetite for her regular meals. The diet should be well balanced, plain and wholesome, slightly more than usual amount. One quart of milk daily should be taken.

*The act of suckling stimulates the formation of milk.* If, therefore, there is not sufficient milk in one breast to supply one complete feeding, the two breasts should be used. This extra nursing will stimulate the formation of more milk. The use of two breasts at each feeding increases the amount of milk, and does not decrease it, as it is sometimes thought.

*To maintain an even flow, the breast should be completely emptied at each and every nursing.* The practice of dropping a nursing and replacing it with an artificial feeding is one of the most frequent causes of the breast drying up.

#### NURSING.

The new-born baby should not be put to the breast for six to eight hours. During the first 24 hours, the baby should not nurse more than four times, but at both breasts each time in order to stimulate the secretion of the milk. If the baby cries much, he should be given boiled water, without sugar, midway between feedings.

Beginning with the third day, the baby should nurse *regularly* every three or four hours, as directed by your physician. The baby is to nurse from one breast at each feeding, alternating the breasts or taking both breasts each time, according to the amount of milk secreted, as shown by the baby's satisfied appetite. The total time of one nursing should not be longer than twenty minutes]

The premature babies and some full term babies such as those low in weight (5-6 pounds), do better when nursed every three

hours instead of every four hours, that is, at 6 a.m., 9 a.m., 12 noon, 6 p.m., 9 p.m., 12 midnight.

Feed regularly by the clock, even if the baby is sleeping. You will soon train him to awaken at the proper time. Regularity in habits makes the baby comfortable and keeps the milk secretion uniform. If the baby is acting like a normal baby as regards sleep and growth, he is probably getting the right amount.

If the baby is not getting enough milk, a fact which would be indicated by stationary weight, or slow gain, by waking before the proper feeding time, etc., then the baby should be allowed to nurse for 10 minutes from each breast at each feeding every three hours.

If the baby at the end of a few days is still not receiving sufficient nourishment, the required amount should be completed after nursing by a modified milk feeding as prescribed by your physician.

If the baby is getting too much, a fact which would be suggested by too rapid gain in weight, vomiting, colicky pains, gas, fat curds in stool; then the baby should only be nursed from one breast every four hours.

If the baby vomits, it may be due to obtaining too much milk, or to obtaining it too rapidly. In such cases, an ounce of water given before nursing may correct the trouble.

If the baby has colicky pains or gas, after nursing, hold it in an upright position until it gets rid of the wind or gas which has collected. The easiest way to do this is to hold the baby over your shoulder.

It is usual for a normal baby when it weighs nine to ten pounds to be nursed every four hours.

When weighing the baby before and after nursing to ascertain the amount of breast milk it is getting, it is well to remember that since the amount may vary slightly at different nursings, it is well to weigh if possible, after two or three nursings at different hours.

In case a mother has not a pair of scales for use in estimating how much the baby is obtaining at a nursing, she may take him to a Child Welfare Clinic. By telephoning the Department of Public Health, Main 16, she may learn where the nearest clinic is located and the time it is held. These clinics are only for well babies. Advice is given the mother to aid her in keeping her child well, particularly along the lines of proper feeding. Facilities are provided for weighing the children. A physician is in charge.

TABLE SHOWING AMOUNT OF FEEDING FOR VARIOUS WEIGHTS AND WHEN TO FEED.

Baby's Weight		Requires for 1 day		Amount of each feeding and intervals between feeding.					
6 pounds		14 ounces		2 ounces every 3 hours—7 feedings					
7	"	16	"	2 $\frac{1}{4}$	"	"	3	"	—7 "
				or 3	"	"	4	"	—5 "
8	"	18	"	2 $\frac{1}{4}$	"	"	3	"	—7 "
				or 3	"	"	4	"	—5 "
9	"	20	"	2 $\frac{3}{4}$	"	"	3	"	—7 "
				or 4	"	"	4	"	—5 "
10	"	22	"	4 $\frac{1}{4}$	"	"	4	"	—5 "
11	"	24	"	5	"	"	4	"	—5 "
12	"	26	"	5 $\frac{1}{4}$	"	"	4	"	—5 "
13	"	26	"	5 $\frac{1}{4}$	"	"	4	"	—5 "
14	"	28	"	5 $\frac{1}{2}$	"	"	4	"	—5 "
15	"	30	"	6	"	"	4	"	—5 "
16	"	32	"	6 $\frac{1}{4}$	"	"	4	"	—5 "
17	"	34	"	6 $\frac{1}{2}$	"	"	4	"	—5 "

## The Victorian Order of Nurses

### Report of Nursing Service in Connection With The Laurentide Paper Company, Grand Mere, Quebec

BY EDITH HASLAM, R.N., VICTORIAN ORDER OF NURSES, SUPT.

THE District work is going on steadily and the nurses' reports show no cases of discharging eyes among the new-born infants this month. A decrease in the number of confinements attended by nurses is perhaps accounted for by the fact that, this being an unfortunate time, the \$3.00 fee cannot be met.

One feels that an important piece of welfare work in the homes could be done if this fee could be reduced this winter, as a valuable field is lost to the teaching of health and demonstration of the advantage of good nursing care for the mother and babe.

We are pleased to report a closer co-operation between our District work and our Child Hygiene Department and that an arrangement has been made whereby one of our French-speaking District nurses will go to the Victorian Order branch at Toronto for two weeks to observe how the bedside nursing care in the homes is being administered. This will raise the standard of our work in this branch of the service and with the large increase in the number of calls for the nurses we will be better able to show the public through the French nurses, the latest means of teaching preventive measures and thus lay a foundation for any further developments which may come about in the future.

The Child Welfare nurse is having a very busy time and is working in close co-operation with the Welfare Committee and much genuine distress is being relieved which otherwise would result in distressing conditions of ill-health and under-nourishment among the women and children.

"The Canadian Mother" book issued by the Federal Department of Health has been given away at the Clinic recently and our supply of both French and English copies soon became exhausted and a request for 500 more copies brought immediately a fresh supply. The French mothers are enthusiastic in their appreciation of the information given in this uplifting Canadian publication, the first of its kind offered for free distribution.

The room at the City Hall being used for the Clinic presents a very cosy atmosphere with its posters and model baby clothes, pro-



viding a very instructive afternoon for our mothers as well as kindling a healthy spirit of competition for better babies. Interested visitors are made welcome and the meetings are well attended in spite of the severe weather.

The School nursing has undergone a change this month. A Staff nurse was going to New York City to fulfil a previous engagement and it occurred to us that she might with advantage look over the school nursing there, as it is being rapidly developed along modern health lines and after two weeks' observation of this, she returned to us full of enthusiasm and eager to begin passing her new knowledge on. On visiting the school the first morning of her appointment as school nurse to the Protestant school, she was surprised to find a large number of children excluded because of whooping cough and other preventable causes, but she was encouraged to find a most sympathetic and open-minded attitude on the part of the Principal and teaching staff. Fearing the development of whooping cough into an epidemic, a conference of the School Management and the Chairman of the Nursing Committee, the Superintendent and the School Nurse was held, and a decision reached which closed the school for two days for disinfecting and cleaning. The new School nurse reports a splendid response to her attempt to instruct the parents in the "Prevention" and the family physicians were all most emphatic in their support and offers of co-operation in this work.

The Hospital continues to be used freely and the variety of cases is interesting this month.

We are particularly gratified to report two "appendectomies" both of which have done extremely well. One was a chronic case and the other a Laurentide employee who complained of acute pain for the first time in the morning and the operation was performed in the evening of the same day. He is now almost ready for discharge. Two women have undergone major operations and have made satisfactory progress. Two confinements were cared for during the month and a case of paratyphoid has returned home cured.

Minor surgery such as tonsils, adenoids, etc., is being carried on three days each week and the surgeons express themselves as satisfied with our service.

The eight-hour day for the nursing staff is proving well worth while, as the nurses are able to carry on work of a high standard without fatigue. Two of the regular hospital staff have been off duty; one has undergone a slight operation and is now almost able to resume duty and the other has completely recovered.

## News Notes

In order to meet the needs of those who desire short courses of instruction in Radiology, the Faculty of Medicine of the University of Toronto have arranged to provide three courses a year of one month each at the Toronto General Hospital. Classes will be limited and an intensive schedule has been outlined to include:—

- (a) Radiographic Technique.
- (b) Interpretation.
- (c) Gastro-Intestinal Examination.

In these courses the entire resources of this large clinic will be placed at the disposal of the student in the most practical manner possible.

The tentative dates are as follows:—

1st Course—February 15th-March 15th, 1922.

2nd Course—Month of October, 1922.

3rd Course—Month of January, 1923.

For full information and terms apply to the Secretary, Faculty of Medicine, University of Toronto.

The Faculty of Medicine, University of Toronto, has instituted a graduate course leading to a Diploma in Radiology.

Candidates for the Diploma must (a) be graduates in Medicine of this University or some other University recognized for this purpose by the Senate; (b) have spent at least one year after graduation as an interne in a recognized hospital.

The Curriculum leading to the Diploma extends over one Winter session of eight months.

The Session will be devoted to courses in:—

- (a) Physics (3 hours daily);
- (b) Radiology.
  - 1. Technique,
  - 2. Anatomy,
  - 3. Pathology,
  - 4. Diagnosis,
  - 5. Radio-therapy.

Examinations on the subjects of the curriculum will be held at the end of the session.

Candidates who have passed the examinations and who present certificates of having satisfactorily completed the work specified will be granted the Diploma in Radiology.

Within the past year and a half 21 auxiliary and industrial classes for subnormal children have been established in the Public Schools of Toronto. Each class has an enrolment of 16 pupils under a specially trained teacher. These classes are doing remarkable work, and already the benefits derived from them are making this felt throughout the whole school system. Where auxiliary classes have been introduced, truancy in the school has been reduced. Mental defectives always contribute a large proportion of truants, because, lacking interest in the ordinary school routine and being unable to keep up with their classmates, they find truancy the easiest escape from their difficulties. The discipline of the schools has equally benefited. The individual teachers state that the removal of subnormal children from the grades enables them to devote all their time to the normal children. The defectives enrolled in auxiliary classes show an actual general improvement, and although intellectually much advancement cannot be hoped for, the progress noted comes through the enlargement of the sphere of general knowledge and experience. One-third of each school day in auxiliary classes is devoted to manual training for the boys and domestic arts for the girls.

The 21 classes at present in operation in Toronto are only a beginning. To adequately supply Toronto's needs at least 140 auxiliary and industrial classes are required. Lack of available class-room space is the problem at present, but it is hoped that by midsummer 10 or 12 classes can be added to the number already in existence. The work in Toronto is being carried forward under the Municipal Department of Health. In other parts of the province the Provincial Department of Education, working in conjunction with the Canadian National Committee for Mental Hygiene, has completed school surveys in Windsor Public and Separate Schools, Chatham Separate Schools, London Public and Separate Schools, Hamilton Separate Schools, and the Public Schools of St. Thomas, Kitchener, Woodstock, Guelph, St. Catharines, Oshawa, Belleville, and Kingston. Several of these cities have already organized and put into operation special classes to meet the needs of the problem cases brought to light by the surveys.

The Public Hospital for the Insane at New Westminster, B.C., is making preparations for the introduction of occupational therapy and industrial occupations among the women patients.

The Canadian National Committee for Mental Hygiene is conducting investigations in factories, for the purpose of collecting first-hand information concerning the relationship between certain mental abnormalities and industrial efficiency.

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In view of the very definite movement in Canada and the United States for the post-graduate education of the medical profession in various centres, a few words on the recent Medical Baby Week in Hamilton will probably be of interest to readers of the PUBLIC HEALTH JOURNAL.

It is recognized by many of the leaders in medical thought that no matter what changes take place in the present system of medical practice, the first essential is the provision for the well trained general man.

The Babies' Dispensary Guild in Hamilton has for more than ten years been conducting its work by the operation of clinics, a visiting nursing service for the babies who come under their observation, and a special relief work for those who are in urgent need. The Officers and members believe that this has become firmly established as a community necessity and that no stone should be left unturned which will further increase the efficiency of the work.

The Babies' Dispensary is rather unique in the fact that its origin came through the activities of a group of the medical profession. Later certain business men were interested who were asked to provide financial assistance for routine work of the Clinic, and subsequently, a Women's Board was formed which has assumed the responsibility for all the Social relief.

The Guild looks to the continued financial and moral support of the public in order to extend these facilities. In order to guarantee the highest standard of efficiency in the conduct and management of the cases coming under their care, it was deemed advisable to hold a Course in Pediatrics embracing the field of work undertaken by the Guild, and the Officers decided that it was well within their scope to stand behind the proposal financially.

Advantages were taken of the opportunity to secure the services of Dr. Wyman C. C. Cole of Detroit. Dr. Cole came to Hamilton highly recommended by Dr. Sedgewick of the Minnesota Graduate School, and was well qualified to present the western school of thought and their method in Pediatrics. The Course was

open to any graduate in medicine in good standing in his Local Medical Society. This Course, under the name of a Refresher Course in Pediatrics, was held October 24th-29th, 1921. The programme consisted of a series of clinical lectures and in addition to this, there was an informal dinner and public addresses to which the ladies and other guests were cordially invited. The following was the programme for the week:—

**Monday, Oct. 24th.—**

- 9.00 a.m.—Clinical Lecture: "Physical Examination and Normal Standards."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Anatomy and Physiology."

**Tuesday, Oct. 25th.—**

- 9.00 a.m.—Clinical Lecture: "Metabolic Diseases."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Breast Feeding."

**Wednesday, Oct. 26th.—**

- 9.00 a.m.—Clinical Lecture: "Convulsions."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Artificial Feeding."

**Thursday, Oct. 27th.—**

- 3.00 a.m.—Clinical Lecture: "Obscure Cases of Fever in Infancy."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Disturbances of Nutrition."

**Friday, Oct. 28th.—**

- 9.00 a.m.—Clinical Lecture: "Tuberculosis and Syphilis."  
3.30 p.m.—Well Baby Clinic.  
6.15 p.m.—Informal Dinner and Public Addresses:  
    "Importance of Early Training, Physical and Mental,"  
        by Dr. W. C. C. Cole.  
    "Present Necessity for the Work of the Guild," by Dr.  
        Helen McMurchy.

**Saturday, Oct. 29th.—**

- 9.00 a.m.—Clinical Lectures:  
    "Disease of Anaphylactic Origin."  
    "Acidosis and the Role of Water in the Infantile Organism."

This Course was attended by fifty-one members of the profession in Hamilton and Dundas. Interest and enthusiasm were maintained throughout the whole week and public interest aroused through frequent press notices.

The successes of this venture were most encouraging and can be thoroughly endorsed for imitation in other centres where it is considered necessary to arouse interest in new work or raise the standard of efficiency in clinics already in operation.

It proved an excellent method of obtaining the generous co-operation of the medical profession and the Officers of the Guild look forward with much assurance, when in the near future an appeal to the public will be made to supply the necessary assistance to enlarge the present scope of the work undertaken by the Guild.

In the coming Spring a campaign will be undertaken to augment the present Building Fund. Membership in the Guild will be encouraged, as well as larger contributions for this special purpose.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF OCTOBER, 1921.

#### COMPARATIVE TABLE.

	1921		1920	
	Cases	Deaths	Cases	Deaths
Small-pox .....	16	0	310	1
Scarlet Fever .....	354	15	387	3
Diphtheria .....	685	56	711	45
Measles .....	16	3	290	3
Whooping Cough .....	129	7	218	22
Typhoid .....	100	30	148	34
Tuberculosis .....	176	98	152	130
Infantile Paralysis .....	21	4	3	1
Cerebro Spinal-Meningitis .....	4	4	6	4
Influenza .....	10	5	13	8
Pneumonia .....	.....	129	.....	142
	<hr/> 1511	<hr/> 341	<hr/> 2238	<hr/> 393

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR OCTOBER, 1921.

	Oct. 1921	Oct. 1920
	Cases	Cases
Syphilis .....	271	205
Gonorrhoea .....	256	383
Chancroid .....	4	19
	<hr/> 531	<hr/> 607

It is most gratifying to be able to report a marked reduction in the number of cases of communicable diseases in the Province for the month of October, compared with the corresponding month of 1920.

It may be observed the decrease in cases are 727 and in deaths 52.

With small-pox almost absent, and a considerable decrease in typhoid, measles, whooping cough and pneumonia the health of the Province may be considered satisfactory.

The increase in the deaths from scarlet fever and diphtheria, with fewer cases reported would indicate these diseases are of a more virulent type than existed in October, 1920, although the case mortality in diphtheria continues low being 8. in 100.

The Provincial Board of Health distributed free 46,109,000 units of diphtheria antitoxin to the districts where applications were made at a cost of \$6,916.00.

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## Editorial

A Toronto paper a few days ago published an interesting article on the value of eugenics. It is a pity that the word "eugenics" is not better understood for it means so much to the ordinary happiness or misery of every-day life. One of the newest uses to which this science of "eugenics" (for it is a science) is put, is in giving scientific advice to young couples contemplating marriage, as to the probable characteristics of their offspring and the establishment of parentage in cases of disputed legitimacy. These subjects were discussed recently at the American Museum of Natural History in New York, where authorities on the study of eugenics from many parts of Europe and America were gathered in the Second International Congress of Eugenics. Much research work has been done, and interesting light thrown on the manner in which musical, literary or artistic talent is handed down from generation to generation.

Major Leonard Darwin of London, a son of Charles Darwin, maintained that it is impossible to attempt to regulate human mating by legislation, and deplored the popular misconception of eugenics, which credited that science with a design to abolish romance and to introduce cattle-breeding principles into the domestic affairs of the human families. On the contrary, love marriages were extolled as natural eugenics, while marriages for money and other advantages were denounced as dysgenic, which means tending to deterioration of the race, instead of its improvement.

Although these questions of heredity and traits of character are important, it is not so much whether their prospective children will develop genius, as that they will inherit good health, that the average young couple are concerned with nowadays. With the increasing facilities for learning about hygienic principles, disease transmission and all the terrible aftermath that follows in the wake of venereal diseases, it is quite evident that intelligent people when thinking of marriage, will more and more inquire into the heredity and health of their partners-to-be.

Some of the inquiries made about such subjects are touching and show the mental worry and even anguish that often prepossesses young couples contemplating matrimony.

Dr. Evans of Chicago, who writes extensively on health topics, has been asked some very terse questions recently by a girl, and he

frankly states that he is puzzled to find a satisfactory reply. Here is what this girl writes:—"How is a young girl to know if it is right to marry a man in a town, who is supposed to have sowed oats once, the wild variety, and was laid up sick, so gossip goes, and who is not strong, but very nice, kind, generous, and anxious for a home and wife. No one will say what he had, or what he has, and would he ask me to marry him if he knew he was diseased? How can any clean girl know what she is getting when no one will say, and she can't ask him? All I know is learned from the movies—'Damaged Goods,' and 'Ghosts' and one of the older women in town told me he was 'unfit for marriage', and when I asked her why she changed the subject. I have no mother, and am only 18 and in perfect health. He seems to be crazy over me, but I don't love him enough to raise idiots, and bury a lot of innocent babes full of poison. On the other hand, I'd be the happiest girl alive to-day to know for sure if he is clean and healthy, for that suspicion is the only toad under my rosebush.

"Please tell me must I leap in the dark, as so many of my earthly sisters have done? To me good health and the joy of living make life. I can't bear to think of sickness and doctors' offices and undertakers and wreaths. It's hateful. I reason out—if he is diseased and I ask him if he will act the offended stunt, and where am I? Do they ever acknowledge it? Would I acknowledge it if it meant the losing of wife, home and happiness?

"Please tell me how I can tell? What are the danger signals? And I am writing in the twentieth century, too! What a thought! The dogs and live stock are far better off when it comes to mating, for human intelligence directs; we just blunder along and litter up the earth with half-wits."

Does not this seem a serious state of affairs? Public Health Education it is obvious, has still a long way to go before reaching the mass of the people—the very people who most need guidance and advice.

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## Notes on Current Literature

*From the Department of Information on Public Health, Canadian Red Cross Society*

### *Health Organization of the League of Nations.*

The Health Committee of the League of Nations is an expansion of the Office International d'Hygiène Publique, which has been operating at Paris since 1907. Dr. C. E. A. Winslow recounts the useful work of this committee of the League in international epidemics, the compilation of vital statistics and the control of the traffic in opium. ("Nation's Health," Nov., 1921, p. 594.)

### *Housing in Canada.*

One hundred and forty-six Canadian municipalities built 3,685 houses in 1920 with the aid of loans from the Federal and Provincial Governments. It is expected that a total of 5,000 houses will be reached during the present building season. ("Social Welfare," Oct. 1st, 1921, p. 6.)

### *Causes of Death in the United States.*

The United States Bureau of the Census reports a death-rate within the registration area in 1920 of 13.1 per 1,000 population as compared with 12.9 in 1919. Increases are shown in the death-rates for pneumonia, heart disease, cancer and automobile accidents. Marked decreases are reported for tuberculosis and influenza. ("U. S. Pub. Health Reports," Nov. 4th, 1921, p. 2723.)

### *Public Health in Ohio.*

A record of the progress made since 1917 when a reorganization took place of both state and local systems of health administration. The extension of public health nursing is noteworthy. ("Journ. American Med. Assn.," Nov. 19th, 1921, p. 1639.)

### *The School Child's Health.*

Education involves a severe strain upon the physical and mental resources of the growing child. This article explains how school medical service and health instruction will increase the child's progress in school and its protection from disease and may actually be the means of saving life. ("Public Health," Sept.-Oct., 1921, p. 316.)

*Sleep Requirements of Children.*

A leaflet issued by the Medical Department of the London County Council for the instruction of parents regarding the sleep requirements of children. ("Public Health," Sept.-Oct., 1921, p. 338.)

*Health Catechism.*

A series of questions and answers on health for teachers of hygiene to children in junior grades. ("Virginia Health Bulletin," Oct., 1921, p. 3485.

*Alcohol and Health Ideals.*

Dr. Lyman Fisk, Medical Director of the Life Extension Institute, discusses the question of the use of alcohol in relation to the health and vitality of mankind. He cites the testimony of laboratory investigation and life insurance experience against the customary use of alcohol and asks that prohibition be given a fair and thorough trial. ("The Medical Officer," Oct. 22nd, 1921, p. 177.)

*Education in Tuberculosis.*

Standards recommended by the National League of Nursing Education for the instruction of student nurses in the theory and practice of tuberculosis nursing. There is a definite need by nurses for a knowledge of tuberculosis, in order that they may play an intelligent part in the educational campaign for the eradication of this disease. ("The Amcn. Journ. of Nursing," Nov., 1921, p. 98.)

*Vitamines.*

The Health Officer of Manchester gives some simple instructions for the use of health visitors who require to give elementary teaching on this subject. ("The Medical Officer," Nov. 5th, 1921, p. 199.)

"*The Little Blue Books*," issued by the Department of Health of Canada, Ottawa. Copies in French and English may be obtained on request to the Deputy Minister of Health, Ottawa.

1. Good Wishes for you from Canada.
2. How to Build the Canadian House.
3. How to Make our Canadian Home.
4. How to Make Outpost Homes in Canada.
5. Canadians Need Milk.
6. How we Cook in Canada.



7. How to Manage Housework in Canada.
8. How to Take Care of Mother.
9. How to Take Care of the Family.
10. How to Take Care of the Baby.
11. How to Take Care of the Children.
12. Household Cost Accounting in Canada.
13. How to Take Care of Household Waste.
14. How to Avoid Accidents and Give First Aid.

*"Plant and Animal Children,"* by Ellen Torelle.

*"The Spark of Life,"* by Margaret W. Morley.

*"The Way Life Begins,"* by B. C. and V. M. Cady.

The three foregoing books describe the growth and development of plant and animal life and show the relation of these facts to human life. The books are written especially for children and should assist those who seek to give sex education by means of nature study.

*Experimental Rickets,* by the Medical Research Council of Great Britain. The experimental work and results described in this paper are the outcome of an investigation into the cause of rickets extending over the last five years.

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## Abstract Service

### AMERICAN SOCIAL HYGIENE ASSOCIATION.

*Further Clinical Studies on the Use of Mercurochrome as a General Germicide.* By Hugh H. Young, M.D., Edwin C. White, M.D., and Ernest O. Swartz, M.D. The Journal of the American Medical Association, Vol. 77, No. 2, July 9, 1921.

Since the publication in 1919 of the preliminary laboratory and clinical study of "Mercurochrome-220," this compound has been used extensively in many urologic conditions in the Brady Urological Institute and in other genito-urinary services and dispensaries. It has been used as a germicide in dealing with diphtheria carriers and in oral pathological cases as well.

After two years of experience with mercurochrome, the authors have come to the following conclusions:

1. Mercurochrome has proved to be a very valuable drug in acute gonorrhoea, but the intense stain is a drawback to its use as an injection by the patient. Acriflavine is free from this objection, and although not so good a germicide, is often preferable in acute cases.
2. In chronic infections of the urethra, prostate, and vesicles, the great value of mercurochrome has been proved. It penetrates deeply and may be found in the prostatic secretion several days after posterior instillation.
3. The results obtained in many cases of chronic cystitis are remarkable, long standing infections often clearing up in a few treatments. In some cases which fail to become sterile, constant reinfection of the bladder is found to occur from kidneys or prostate.
4. Mercurochrome is less irritating and produces less reaction in the renal pelvis than silver nitrate solutions, while possessing about equal germicidal powers, but in some cases both drugs should be used alternately, and sometimes silver is better.
5. In some cases of pyelitis, the infection comes from the teeth, tonsils, etc., and sterilization of the pelvis is impossible until the primary focus is cured.
6. Continued use has proved it to be a most satisfactory dressing for venereal ulcerations and buboes.
7. In general surgery, reports indicate that mercurochrome is very valuable in dressing open wounds and sinuses.
8. The germicidal efficiency of the drug in other branches of medicine and surgery has been proved, especially in the treatment

of infections of the throat, nose, sinuses, ear, eye and teeth. It is reported to be the most efficient in disinfecting throats of diphtheria carriers.

*Present Opinions of Intraspinal Therapy in Neurosyphilis.* Eugene Bourdreau, M.D. *Medical Record*, Vol. 100, No. 18, September 24, 1921.

The author states that the purpose of this paper is to try to remove some difficulties and to help to clear thinking in the problem of neuro-syphilis. To this end he utilized the opinions of various authorities in the field. Fildes, Swift, Sachs, Stoner, Dercum, and Fordyce are quoted extensively.

It would appear from the material in hand that it is safe to accept the following conclusions:

1. The central nervous system is early invaded by the *treponema pallidum*, and without necessarily giving clinical signs.

2. Vigorous intravenous salvarsen treatment associated with mercury and the iodides removes the danger in a larger number of cases. This must be confirmed by negative findings in the cerebrospinal fluid.

3. Certain cases do not respond to this treatment alone.

4. For these cases the best treatment so far devised, but not ideal, is by the Swift-Ellis-Ogilvie method because various observers agree that clinical evidence shows it to be beneficial and the laboratory evidence is that in all but potential paretics the signs become negative if thoroughly carried out, and because both avenues of approach are employed.

5. That the method of Byrnes (mercurialized serum) is more dangerous and produces severe reactions.

6. That the drainage method of Dercum is not without danger, is extremely painful, and the results obtained by observers are not in agreement.

*An X-Ray Study of the Progressive Changes in the Lungs and Aorta in Tuberculosis with Syphilis.* By Cleaveland Floyd, H. K. Boutwell, and R. L. Leonard. *The American Review of Tuberculosis*, Vol. V., No. 7, September, 1921.

For detection of pulmonary syphilis the X-ray is a valuable adjunct, as few of these lesions come to autopsy and the condition must be demonstrated by clinical methods. Pulmonary syphilis consists of a symptom-complex of history, positive Wassermann test, extrapulmonary lesions, continued negative sputum for the tubercle bacillus, and pulmonary signs found at the base or toward

the hilum. The effect of an intercurrent syphilitic infection upon an established pulmonary tuberculosis is that of stimulation of the production of fibroid tissue formation.

The routine Wassermann test in the clinic of the Boston Consumptive Hospital has shown that 8 per cent. of the male patients have syphilis. Of these cases, 50 have had X-ray examinations over a period of years, during which time they have been treated more or less extensively for syphilis. Only two cases were fairly typical of pulmonary syphilis.

The following conclusions are drawn:

1. Every case having tuberculosis and syphilis combined should be given intensive syphilitic treatment, more especially if the lesion is not typically one of tuberculosis.
2. The presence of syphilis may at times considerably aid the production of fibrous tissue in the lung.
3. Syphilitic dilation of the aortic arch, even in well marked instances may be improved by prolonging intensive antisiphilitic treatment.

\* \* \* \* \*

Apropos the above subject, an article in the June, 1921, issue of the *New York Medical Journal*, by H. N. Ninton, contained the following interesting facts:

1. Syphilis of the apices of the lungs is not by any means a rare condition and there are many cases of this disease being treated for pulmonary tuberculosis.
2. The Wassermann and other blood tests should be used more extensively in private practice in cases giving signs and symptoms of active tuberculosis, but not giving positive sputum. By so doing, many cases which are running a rapidly downward course would be arrested.

W. W. Watkins, in an article in the May, 1921, number of the *American Journal of Roentgenology*, made the following comments in regard to the same subject:

1. In the treatment of systemic lues, it is important to know whether the lungs are involved, since a Herxheimer reaction in the lungs may be serious.
2. It is important in tuberculosis to ascertain whether the patients combat this comparatively benign single infection or whether a sinister combination with active syphilis must be treated.
3. It may be triply important not to disturb the fibrotic changes of latent syphilis by arsenical treatment, if the tendency of this fibrosis is to arrest the tuberculosis.

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